

IN THE CLAIMS:

1. (Currently Amended) A device ~~Device~~ for dry forming a web of fibers, the device comprising:

a fiber distribution head;

a forming wire ~~movable~~ adjacent to ~~[[under]]~~ said fiber distribution head, said fiber
5 distribution head being located on one side of said forming wire, said forming wire being
movable in a forming wire direction;

a suction means located on ~~the opposite~~ another side of said forming wire such that said
suction means is located opposite ~~[[from]]~~ said head; ~~within said head;~~

a screen mesh;

10 a chamber defined within said fiber distribution head, said chamber receiving ~~into which~~
a flow of gas, said gas including in which said fibers ~~[[are]]~~ suspended therein, is directed, the
said chamber having a bottom opening closed by a portion of said screen mesh, said portion of
said screen mesh extending substantially ~~which is essentially~~ parallel to said forming wire, said
portion of said screen mesh being disposed opposite said forming wire, said portion of said
15 screen mesh having a surface disposed opposite an interior of said chamber ~~and which faces the~~
~~latter;~~ and

agitator members arranged within ~~inside~~ said chamber, said agitator members
being arranged ~~directly above~~ adjacent to said screen mesh, ~~[[for]]~~ said agitator members
agitating and distributing the fibers on ~~[[the]]~~ said surface of said portion of said screen mesh,
20 facing the interior of said chamber; characterized in that: ~~[[•]]~~ said screen mesh is made to be

being continuous and movable along a closed path around said chamber, ~~[[the]]~~ said portion of said mesh screen being movable ~~parallel to and facing the forming wire moving along a path which is essentially parallel to a path of said forming wire,~~ ~~and~~ ~~[[•]]~~ said agitator members ~~comprise~~ comprising a plurality of rotating shafts, each rotating shaft being ~~which are~~ parallel to ~~each other~~ another rotating shaft and to ~~[[the]]~~ said screen mesh, each rotating shaft being ~~[[and]]~~ orthogonal to ~~the direction of advance of said forming wire~~ direction, each of said rotating shafts ~~being provided with~~ having shaped profiles to ~~agitate~~ for agitating the fibers in said chamber, each rotating shaft having an axis of rotation, each rotating shaft being rotatable about said axis of rotation.

2. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 1, ~~characterized in that wherein~~ a plurality of diffusers ~~opens into~~ are in communication with said chamber, ~~[[these]]~~ each of said diffusers being positioned above ~~[[the]]~~ said agitator members, each diffuser having ~~and being provided with~~ outlets for supplying said flow of gas and fibers, each outlet being disposed opposite one of ~~facing~~ said agitator members, ~~for the admission of said flow of gas and fibers.~~

3. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 1, ~~characterized in that wherein~~ said chamber is associated with suction members for sucking in and recycling lumps of fibers which do not pass through said screen mesh.

4. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 3, ~~characterized in that~~ wherein said suction members comprise at least one set of suction inlets, one suction inlet being adjacent to each other another suction inlet along a direction of alignment, said direction of alignment being substantially perpendicular ~~which is transverse with respect to the direction of advance of said forming wire~~ direction.

5. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 4, ~~characterized in that~~ wherein said at least one set of suction inlets is aligned parallel to ~~the axes of~~ said axis of rotation of each of said agitator members.

6. (Currently Amended) A device ~~Device~~ according to [[Claim]] 4, ~~characterized in that it~~ wherein said suction members comprise ~~comprises~~ two sets of suction inlets located at two opposite ends of the chamber along [[the]] a direction of advance of [[the]] said screen mesh.

7. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~ wherein each of said agitator members comprises an independent ~~motors (46)~~ motor.

8. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 7, ~~characterized in that~~ wherein each of said independent motors [[are]] is bidirectional.

9. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~
wherein each of said shaped profiles (51) carried by said shafts have has a configuration with
at least one point.

10. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~
wherein each of said agitator members comprises a shaft on which is keyed a plurality of disks,
each disk being connected to ~~each of which carries~~ at least one of said shaped profiles.

11. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 10,
~~characterized in that~~ wherein each of said profiles has at least one configuration essentially in
~~the form a shape~~ a shape of an isosceles triangle, each of said profiles extending along ~~lying on~~ a
cylindrical surface of one of said disks, each of said profiles having curved ~~[[their]]~~ sides which
5 converge on the ~~at a vertex, each of said sides of said profiles being curved and~~ having ~~[[their]]~~
a concavity facing in a direction ~~[[the]]~~ outside of the triangle to form a point.

12. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 10,
~~characterized in that~~ each of said disks is associated with at least two of said shaped profiles,
each of ~~which has~~ said shaped profiles having at least one point.

13. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~
wherein is located at a position ~~a compartment for the introduction of an auxiliary flow of gas~~

is ~~provided~~ above ~~[[the]]~~ said chamber, said compartment delivering an auxiliary flow of gas,
wherein holes being made in a separating partition ~~[[which]]~~ separates said compartment from
5 said chamber, said separating partition having holes, said holes receiving to allow said auxiliary
flow of gas such that said auxiliary flow of gas passes to pass from ~~[[the]]~~ said compartment
to ~~[[the]]~~ said chamber.

14. (Currently Amended) A device ~~Device~~ according to claim 2, ~~characterized in that~~
wherein said diffusers extend from ~~[[said]]~~ a separating partition towards ~~[[the]]~~ said interior
of ~~[[the]]~~ said chamber.

15. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 2,
~~characterized in that~~ wherein each of said diffusers ~~[[(15)]]~~ is aligned with another diffuser such
that each of said diffusers is ~~[[are]]~~ arranged ~~in alignments~~ essentially parallel to each axis of
rotation of said rotating shafts ~~the axes~~ of said agitator members.

16. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 2,
~~characterized in that~~ wherein each of said diffusers terminate in outlets elongated in a transverse
direction with respect to ~~the direction of advance of said forming wire~~ direction, ~~and in that the~~
~~apertures of said outlets and their distance from the screen mesh are such that the jets wherein~~
5 a jet of gas and suspended fibers delivered via one diffuser intersects with a jet of gas and
suspended fibers delivered via an adjacent diffuser at a position located ~~from adjacent outlets~~

intersect above ~~[[the]]~~ said screen mesh.

17. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~ wherein a ~~[[the]]~~ distance from ~~[[of]]~~ said screen mesh ~~from the~~ to said agitator members is adjustable.

18. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~ a wherein said portion of said screen mesh, ~~forming the bottom closure of said chamber,~~ is guided by guide members, wherein a distance from said guide members to said ~~whose distance from the~~ agitator members is adjustable.

19. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 18, ~~characterized in that~~ wherein said guide members comprise an upper frame and a lower frame, said upper frame being essentially parallel to each other said lower frame, said upper frame and said lower frame defining a screen mesh portion space, said portion of and spaced apart from ~~each other, through which said screen mesh passes~~ extending through said screen mesh portion space.

20. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 19, ~~characterized in that~~ wherein said upper and lower frames are supported in a position which is adjustable with respect to ~~[[the]]~~ a position of the agitator members.

21. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 20, ~~characterized in that~~ wherein said upper and lower frames are supported by a sliding block which can be adjusted and clamped on the supporting structure of said head.

22. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 21, ~~characterized in that~~ wherein said sliding block supports at least two return rollers of said screen mesh, said portion of said screen mesh extending between one of said return rollers and another of said return rollers ~~which extends said portion of the screen mesh which closes the bottom of said chamber.~~

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23. (Currently Amended) A device ~~Device~~ according to claim 19, ~~characterized in that~~ wherein said upper frame is ~~integral~~ integrally connected with a guide section for said screen mesh.

24. (Currently Amended) A device ~~Device~~ according to claim 19, ~~characterized in that~~ wherein said lower frame is ~~integral~~ integrally connected with a guide section for said screen mesh.

25. (Currently Amended) A device ~~Device~~ according to claim 18, ~~characterized in that~~ wherein an extendable ~~seating~~ sealing means ~~[[are]]~~ is positioned between said guide members and ~~[[the]]~~ said chamber ~~of said forming head.~~

26. (Currently Amended) A device ~~Device~~ according to claim 19, ~~characterized in that~~ ~~said wherein an~~ extendable sealing means comprises a section ~~integral~~ integrally connected with said upper frame, said section cooperating and interacting with a perimetric edge surrounding the bottom opening of said chamber.

27. (Currently Amended) A device ~~Device~~ according to claim 18, ~~characterized in that~~ ~~wherein an~~ adjustable sealing means ~~are provided~~ is arranged between said guide members and said forming wire.

28. (Currently Amended) A device ~~Device~~ according to claim 19, ~~characterized in that~~ ~~wherein an~~ ~~[[said]]~~ adjustable sealing means comprises a box having an opening located opposite ~~open above and below, towards~~ said screen mesh and another opening located opposite ~~towards~~ said forming wire, said box being supported by said lower frame.

29. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~ ~~it comprises~~ further comprising an internal cleaning means ~~[[for]]~~ cleaning the surface of the screen mesh ~~facing~~ disposed opposite said interior of said chamber.

30. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 29, ~~characterized in that~~ ~~wherein~~ said internal cleaning means ~~[[are]]~~ is a suction ~~[[means]]~~ device.

31. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that it comprises~~ further comprising an external cleaning means for cleaning ~~[[the]]~~ a surface of the screen mesh disposed opposite said ~~facing the~~ forming wire.

32. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 31, ~~characterized in that~~ wherein said external cleaning means ~~[[are]]~~ is a suction ~~[[means]]~~ device.

33. (Currently Amended) A device ~~Device~~ according to claim 1, ~~characterized in that~~ wherein said screen mesh ~~[[runs]]~~ extends around a plurality of return rollers, each of said return rollers being located around said chamber, each of said return rollers being located at a position outside of said chamber ~~and outside it~~, at least one of these rollers being powered via a motor.

34. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 33, ~~characterized in that~~ wherein at least one of the return rollers is located directly downstream from the bottom opening of the chamber with respect to ~~[[the]]~~ a direction of advance of said screen mesh, said at least one of said return rollers being ~~[[is]]~~ associated with a doctor blade means for removing ~~[[any]]~~ detritus adhering to said roller.

35. (Currently Amended) A device ~~Device~~ according to ~~[[Claim]]~~ claim 33, ~~characterized in that~~ wherein at least one of said return rollers is supported in a movable way

for tensioning said screen mesh.

36. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 33, ~~characterized in that~~ wherein at least one of said return rollers is associated with a means of aligning [[the]] said screen mesh.

37. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 13, ~~characterized in that the assembly formed by~~ wherein said chamber and said compartment is delimited outwardly by a box, said box having an opening being located adjacent ~~which is open only next~~ to said screen mesh.

38. (Currently Amended) A device ~~Device~~ according to [[Claim]] claim 10, ~~characterized in that~~ wherein each of said shaped profiles is symmetrical, each of said shaped profiles having ~~and has~~ two points orientated in two opposed directions in [[the]] a tangential direction of said disks.